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ANATOMY, SURGERY, AND OPHTHALMOLOGY.

By GEROGE C. BLACKMAN, M. D., Professor of Surgery in the Medical College of Ohio; Surgeon to St. John's Hospital; Fellow of the Royal Medical and Chirurgical Society of London.

ART. I.—*Amussat's Operation for the relief of Cancer of the Rectum.* By GEORGE C. BLACKMAN, M. D., Prof., etc., Cincinnati, O.

R. L. WESTON, æt. 45, consulted me in December, 1865, and stated that until the March previous, he had enjoyed most excellent health. About this time he began to suffer from a constant straining, and great disposition to go to stool, but passed only mucus, and blood. His appetite, however, continued good, as did his general health, until the first of July. He now experienced, at times, much difficulty in voiding his urine, and his appetite and strength began to fail him. The pain in the rectum had increased in intensity, so that he could no longer attend to his business, that of a house carpenter. At the beginning of his disease he used no remedies; but in May and June he was treated for "blind piles," without any benefit. In August he had recourse to morphia, and bougies were frequently passed up the rectum, causing him excruciating pain. On the 19th of December he was admitted into St. John's Hospital, and on examination, under chloroform, the rectum was found filled with a fungoid mass, which had often caused complete constipation, lasting at times for weeks. Indeed, he declared that for

ten weeks he had not passed a teacupful of fecal matter! On the 17th of January he was brought into the amphitheater, and in the presence of the class and numerous physicians, I performed Amussat's operation. As stated in our February No., p. 54, Mr. Weston was a man of stout frame, and although quite feeble at the time of the operation, he still retained a large amount of adipose tissue, both subcutaneous and within the abdominal muscles, which rendered the proceeding much more difficult than in the case of our first patient, Luke, reported in the January number of this Journal. Aware of the difficulties encountered by Mr. Erichsen in the case reported by him in the *London Lancet*, January, 1857, we made our external incision some six and a half to seven inches in extent, instead of four inches, as practiced by Mr. E. On opening the anterior layer of the fascia transversalis masses of cellulo-adipose tissue presented themselves, and on dividing these a large quantity of loose fat was exposed, which, rising and falling with the respiratory movements, rendered it difficult to identify the intestine which was contracted and empty. Mr. Erichsen has described a precisely similar condition of the parts, and, as in his case, the masses of fat were partly dissected, partly torn through, until the bowel was recognized by its greenish-gray color, which offered a striking contrast with the yellowish-buff color of the adjacent tissues. On account of the great depth of the wound we divided the deeper layers of muscles crucially in order to gain more room. This has been objected to, as it endangers the lumbar arteries, but we found no difficulty from this source. Our chief difficulty arose from the abundance of fatty tissue in front of the quadratus lumborum muscle, and in the region of the kidney. Matters progressed favorably after the operation, and in the course of a few weeks he left for his home in Hamilton. He had a considerable prolapsus at the seat of the artificial anus, but this was always easily returned, and retained by means of a compress and bandage. Mr. Weston survived the operation until the 11th of October. Dr. McNeely, of Hamilton, O., attended the patient to the time of his death, and in a letter received from him dated October 13, he states: "The artificial anus answered the purpose for which it was made admirably. The fecal matter came away without pain, and with tolerable regularity, and saved him that terrible agony which he formerly suffered when the feces passed out through the cancerous rectum."

I am indebted to Dr. McNeely for the following account of the autopsy which he had the kindness to make for me.

The "post mortem" examination of Weston was held at 10 A. M. of the 12th inst., twenty-four hours after death.

There was a very considerable hernial protrusion from the artificial opening, and much of that same fetor, that had existed previous to death. He was not so much emaciated as is ordinarily the case with those who have so long been invalids.

On opening the abdomen we found nothing abnormal, until pulling aside the intestines there was an enormous deposite of adipose tissue lining the walls of the abdominal civity. The colon below the point of the operation was found empty, but pervious, and healthy, until we reached the sigmoid flexure which was diseased, as well as the whole of the rectum and bladder—all the contents of the pelvis were diseased, adherent to each other, and to the pelvic walls. The bladder was much thickened, and on being cut open pus and a very small quantity of urine escaped. (For six weeks previous to death, pus had constantly escaped with the urine.) The kidneys were enveloped in an unusual amount of fat—were pale and flabby.

ART. II—*On the Chief Cause of Death after Hernia Operations.* By JONATHAN HUTCHINSON, F.R.C.S.

Gentlemen:—We admitted last week three patients suffering from strangulated hernia. In all three the usual symptoms of strangulation were present, and severely marked; and in all the taxis had been fairly tried. In one, after some perseverance, we succeeded in effecting reduction by the taxis; in the two others I was obliged to operate. The case in which taxis was effectual was that of a man with inguinal hernia; in the other two cases the patients were women, and the hernia femoral. You will see, therefore, that our success was according to well established rule. I have often remarked to you, that with care and perseverance we may, almost always, succeed in reducing an inguinal hernia; whilst in the femoral variety, on the contrary, when once tight strangulation has occurred, and a certain time has elapsed and the first efforts at taxis have failed, it is comparatively rare for the later ones to succeed. The reason of this difference is easily given. In inguinal hernia the surgeon can steady the neck of the tumor between the finger and thumb of one hand whilst he makes compression with the other. In femoral hernia it is very difficult to act thus upon the neck of the sac, owing to its deep position. Our pressure, therefore, in the cases of a femoral hernia, can not be directed so accurately in a line with the neck of the sac as it may be in inguinal. In spite of all of our efforts to prevent it, the neck of the sac is more or less doubled on itself. Apart, however, from the mere steadying the neck of the sac by the finger and thumb, as we do in inguinal hernia, it is possible very materially to influence the slipping up of the contents, by making alternate pressure and relaxation. In the management of the neck of the sac, in fact, consists the great art of successful taxis, and it is one well worth a good deal of pains-taking to acquire. Those who have obtained

it will but rarely find it necessary to operate for inguinal hernia. I could mention the names of several surgeons to London hospitals who, in the course of very extended practice, have scarcely ever operated for inguinal hernia. Our two cases of femoral hernia were both of them attended by very severe symptoms, and in both, having failed in an attempt at taxis, while the patient was under the influence of chloroform, I immediately proceeded with the operation. One of them is doing well; the other died of peritonitis thirty hours afterward. In the latter case we shall find some features well worthy of our attentive consideration. Mrs. ——— was a moderately stout woman, the mother of a large family, residing at Tottenham. She was brought to us on Tuesday afternoon by a surgeon who had attended to her at home, and by whom the taxis had been very carefully tried, and judicious general treatment had been adopted. The taxis had been quite ineffectual, and the symptoms were severe. Strangulation had existed for about fifty hours. The tumor was large, at least the size of a fist, and it projected forward, overlapping the lower edge of Poupart's ligament. It had no impulse, and was quite dull on percussion, but felt solid, as if containing a considerable mass of omentum. I could make no impression upon it in the way of taxis. I therefore proceeded to operate, hoping to succeed without opening the sac. The steps of the operation were exactly those described by Mr. Luke in his paper in the *Medico-Chirurgical Transactions*, and which you will find quoted *literatum* in that really wonderful repertory of surgical information, Dr. Druitt's *Vade Mecum*. The operation was a little less easy than usual, on account of the size of the tumor, and the great distance of the neck of the sac from the surface. After notching the lower edge of Poupart's ligament, and then dividing some fibres of the *fascia propria*, which constricted the neck of the sac lower down, a considerable portion of the contents of the sac returned. Its bulk was diminished perhaps one third. I felt confident that all the intestine had gone, and that what remained was only omentum; and as we had reason to believe that part of the hernia had for long been irreducible, I was not sanguine that I should be able to return the rest. As however I wished to avoid all risk of leaving intestine unreduced, I determined to examine the remaining contents, and accordingly laid the sac open. Having done so we found, as expected, only omentum in it. This omentum was adherent at several parts so firmly that I preferred not to detach it, and accordingly adopted the practice which I think is, on the whole, preferable under such circumstances, of leaving the omentum *in sitû*.

You will observe I might have adopted any one of several other procedures. We might have broken through the adhesions, tied any bleeding points, and then forced the omentum up into the abdomen; we might have tied the whole mass at the neck of the sac, then cut away the lower portion, and left the pedicle *in sitû*; or we might have cut away the protruded portion, tied any bleeding vessels, and then returned the pedicle. My conviction is that less risk of peritonitis is run by leaving adherent omentum *in sitû* in the sac than by any other plan. Sometimes under such circumstances the sac will inflame, and the parts become adherent, and the cavity will be obliterated; in others,

however, the external wound will heal without any inflammation of the sac itself. You will observe that I am speaking of cases in which the omentum is sound, and, indeed, it is very unusual to find it materially damaged; its integrity does not suffer nearly so soon as does that of the gut.

To return to our case. You will note that the intestine had slipped up into the abdomen before the sac was opened, and that it had consequently not been exposed to the air, nor had any opportunity been afforded for inspecting its condition. Proceeding on the supposition that peritonitis would almost certainly follow, I ordered calomel and opium to be administered from the first—a grain of calomel and a quarter of a grain of opium every three hours. After the operation, the patient was relieved as regards her sickness. She had no vomiting, and for some hours was in comparative comfort. The operation had been performed at about four in the afternoon. On the following morning she considered herself much better, but her countenance was anxious, her tongue was dry, her knees were drawn up, and the abdomen was full, tympanitic, and tender on pressure. Leeches were now ordered to the abdomen, to be followed by a large poultice. The calomel and opium were continued. In the course of the afternoon she became much worse, and in the evening she died. An hour before her death the sickness returned, and her collapse was greatly increased by her frequent and violent vomiting. On the following day we made the *post mortem*. Her symptoms had been so severe and so rapid in their course that I was quite prepared to to find that the intestine had given way, and that peritonitis from extravasation of feces had resulted. Such, however, was not the fact. Peritonitis there was, as evidenced by flakes of recent lymph gluing the coils of intestine together wherever they came in contact. This lymph was soft and gelatinous, and it was especially abundant near the site of the hernia. Near to the hernial ring there was a quantity of bloodstained serum, but it had no fecal odor; and that the intestine had not given way was easily proved by the fact that it was still tense and distended. Lying close to the neck of the sac was the coil of intestine which had been strangulated. We could easily distinguish this portion. It was about two inches long, and was deeply congested. At one extremity it had been much more tightly strangulated than at the other, and the consequence was that at this spot a deep constriction still existed, almost as if it were tied up in a ligature; whilst, at the other, no such constriction could be seen, and we could only distinguish the part which had been strangulated from that above it by the difference in color. At the tightly constricted part the intestine was, although very much narrowed, not wholly obstructed. We could squeeze the intestinal contents backward and forward through this tract; and that flatus had passed during life was tolerably certain, for the gut below the strangulated portion was as much distended as that above it. You will see presently that all these details are important. Before explaining them further we will describe the condition of the gut. It is a question often asked, and a most important one, What are the conditions presented by intestine in a state of gangrene? We have before us in this specimen, allowing for a little alteration, owing to its

having been in spirit, an excellent illustration of them as seen at an early stage. In the first place the intestine is of a deep purple color and its surface is almost everywhere roughened; there is no deep ulceration, but yet the smooth polish of the peritoneal surface is quite lost. In this point as to smoothness of surface, it contrasts remarkably with the rest of the intestine. You might fancy that the loss of polish was due to inflammatory effusion upon it, but such is not the case. You can not restore the polish by washing it. The unevenness is due to minute punctate ulceration of the serous membrane over the whole surface. A similar condition of extensive loss of polish, without deep ulceration at any one part, is frequently observed in certain forms of inflammation of the cornea.

We have to add one other feature in yet stronger proof that this portion of intestine was about to become gangrenous.

At two or three spots there are small patches, abruptly margined, of an ash-gray color. Two or three of these patches are seen close to the margin of the constriction, and are evidently due to the direct influence of the stricture; but one, and the largest, is on the middle of the strangulated portion of the gut, on its convexity, and where no direct pressure can have occurred. It is clear that this latter may be taken as an index of the state of nutrition of the whole strangulated knuckle. Intense congestion, loss of polish of surface, with patches of gray discoloration, are therefore the characters which denote impending gangrene. A little earlier in the stage the ashy patches would not be present. A little later we should find added a fourth and very important condition, namely, flaccidity, or collapse of the gut, owing to the escape of its contents. This escape might be through a mere pin-hole aperture which might transmit flatus only, thus allowing the gut to become flaccid, without any perforation of considerable size. In addition to the features which I have pointed out, we see on our specimen a few flakes of shreddy lymph at different parts. More especially at the constricted portion it is evident that lymph has been effused. If with a little force we were to break across the bands of lymph existing at this part, the evidence of constriction would no doubt become diminished.

Now let us ask the important questions—of what did this patient die? and could any modifications of treatment have been adopted likely to have given her an increased chance of recovery? We may increase the importance of these inquiries by just remarking that her case is not a rare one, but a very common one, and that after operations for hernia about one in four of our patients die, as she did, of *Acute Peritonitis*. To what is this peritonitis directly due?

First, I wish to establish clearly a fact on which I have often insisted, that peritonitis very rarely occurs before the operation is performed. The contrary to this is, I believe, the general impression, and we constantly hear the question discussed before an operation as to whether peritonitis be already present or not. The mistake arises, I think, partly from the difficulty in diagnosing between the symptoms of obstruction of the bowel and those of peritonitis, and partly because we do not credit the extreme rapidity with

which certain morbid processes are developed. At the autopsies after hernia operations, we almost always find the peritoneum extensively inflamed; and as in many of these the patient has lived but a very short time after the operation, it has been the custom to assume that the inflammatory action must have existed previously. It is, however, almost impossible to exaggerate our conception of the wildfire rapidity with which the inflammation of a serous membrane may commence and may extend, when once an adequate cause has been supplied. Instances in proof occur especially in ovariotomy operations, after which patients may die of peritonitis within thirty-six hours of the operation, the symptoms having been present almost from the first hour. Nature is no laggard either in her processes of normal development or in those of abnormal actions. Other instances are frequently seen in wounds of joints, wounds of the abdomen, and wounds of the eye. In all these we frequently see the most acute forms of inflammation, with the most abundant inflammatory products, developed in twenty-four hours, or it may be in much less. In the case of hernia operations, we rarely are able to adduce positive proof as to the non-existence of peritonitis prior to the operation, and are, therefore, unable to prove its exact date of commencement.

As to the symptoms which, in cases of strangulated hernia prior to the operation, are supposed to indicate peritonitis, they are, I suspect, usually due to obstruction only. We have sickness, constipation, an anxious expression, a somewhat dry tongue, but there is seldom, if you carefully examine, any great tenderness of the abdomen. There is a painful sense of dragging if you press on the belly near the neck of the hernia, but there is none of that general intolerance of pressure which marks a case of peritonitis. The symptoms present are exactly those which mechanical occlusion of the intestinal tube would cause; and to the effects of this mechanical occlusion we have added those of a greater or less degree of shock to the system, induced by the tight constriction and impending death of part of an exceedingly important viscus. There is no need to import the idea of peritonitis in order to account for the anxious expression of the patient's face, for the dry tongue, or for any deviations from the normal standard which the pulse may exhibit. But my chief reasons for disbelieving in the existence of peritonitis in connection with intestinal obstruction prior to any operation are, that we obtain every now and then conclusive *post mortem* proof of its absence. It is very rare for a patient to die of hernia without having had an operation performed. One such case has, however, occurred to myself. The patient was admitted, moribund, on the tenth day after strangulation. Mr. Curling joined me in consultation just after she was carried into the ward. We declined to operate, and she died within two hours. The contents of the sac were much inflamed, but within the abdomen there was not the slightest trace of peritonitis. Then, again, in the numerous cases of internal abdominal obstruction, we frequently have proof that all the ordinary symptoms of strangulated hernia may be present without peritonitis. In these cases, if no operation is performed, death often takes place after many days of sick-

ness and constipation, and in a certain number of these *post mortem* proves that no peritonitis was present.

To Mr. Travers' able work on *Injuries to the Intestines*, we are indebted for many of the opinions still current. Mr. Travers held that mere obstruction to the passage of the contents of the intestine through its tube, was an efficient cause of peritonitis, and the chief one in activity after hernia operations. He grounded this opinion partly upon experiments on animals and partly on clinical observation. Let me quote one of his experiments, which, I think, admits of a very different interpretation. He drew a portion of intestine through the abdominal parietes of a dog, tied it tightly and fixed it in its position externally. We might suppose that if mechanical obstruction of the intestinal tube could induce peritonitis, that result must follow under such circumstances; but Mr. Travers, after stating that he has frequently tried the experiment, writes in conclusion: "It rapidly induces sphacelus, in which state the gut bursts, and speedily gives issue to the contents of the upper bowels. The animal is immediately relieved by the discharge, an artificial anus is formed, and though the experiment is ultimately fatal the peritoneal surface invariably remains healthy." "A firm circle of adhesion is formed at the peritoneal opening."* This is exactly what would have been expected on the hypothesis that a hernial strangulation does not *per se* involve inflammation of the peritoneum within the abdomen, and you will ask how Mr. Travers could, in spite of such a conclusion, still advocate the opinion that peritonitis is the direct and common result of mere obstruction. He believed that in the cases I have mentioned, the reason that peritonitis did not ensue was because the constriction of the gut was so tight as to induce sloughing and the speedy formation of an artificial anus. By the artificial anus the obstruction was relieved, and according to his hypothesis peritonitis was prevented. He performed another series of experiments in which the intestine was drawn out of the abdomen through a small opening, and there left, no ligature being applied. In these cases the loop of intestine so treated inflamed, but did not slough, and peritonitis followed. To what was the peritonitis in this group of experiments due? Mr. Travers replies, "to obstruction of the intestinal tube;" but my own impression is greatly in favor of the belief that it resulted rather from inflammation of the exposed portion, which inflammation was permitted, by the condition of the orifice, to travel upward on the visceral peritoneum to the interior of the abdomen. The doctrine of spread of inflammatory action by continuity of living tissue, is one of which it is impossible to overrate the importance. It is the fundamental doctrine to which we must appeal in explanation of half the pathological events with which the surgeon has to deal. The effect of a tight ligature at the neck of an extruded portion of gut is to prevent this extension of inflammation inward. It causes the maltreated

*See *An Inquiry into the Process of Nature in Repairing Injuries of the Intestine*, page 207.

portion to die right out rather than to inflame, and it interrupts the continuity between the dead and living portions.

In a case of tightly strangulated hernia, the conditions are very similar to those in Mr. Travers' first series of experiments. The tightness of the stricture in the first place causes the intestine to pass gradually into a state of gangrene; in the second, it efficiently prevents the morbid processes going on within the sac from spreading upward to the abdominal cavity. If the stricture is only moderately tight, then the progress toward gangrene may be slow, but it (the stricture) is still sufficient to prevent peritonitis. I appeal to the experience of hernia operators who have had occasion to draw down the bowel into the sac, and to inspect its state above the seat of stricture, for confirmation of my statement that the bowel at this part is almost always found free from inflammation. There may be a few bands of adhesion close to the seat of stricture, but above these the bowel is quite free from lymph, smooth, glistening, and sometimes even pale. To those who have seen the abdomen opened for the relief of long continued internal obstruction, I further appeal for evidence against the doctrine that obstruction is in itself a cause of peritonitis.* My own experience has been that under such circumstances, unless some extravasation have previously occurred, the intestines are not found inflamed; and further that when within a few days after the operation the autopsy is obtained, then the evidences of peritonitis are most abundant.

We may then, I think, assert with some confidence, as regards cases of strangulated hernia, that peritonitis does not usually occur before the operation, and that mere obstruction of the intestinal tube does not cause it. To what then is it due, when it follows, as it so often does, close on the heels of the very measure which was intended to save the patient's life? My answer is that there are two main causes, and that of these one is of far more importance than the other. The first and less important is the wound of peritoneum in the operation, and the introduction of the surgeon's finger, director, etc., into its cavity.† This form we may distinguish as *direct trau-*

*I must here extend a caution against judging from cases which are of a complicated nature, or in which, it may be, a mistake in diagnosis has occurred. Cases of idiopathic peritonitis may easily be mistaken for cases of abdominal obstruction in which peritonitis has supervened.

†I once assisted a colleague in an operation for inguinal hernia in a young and healthy man. All the conditions were favorable, strangulation had only existed about six hours, and the symptoms, although well marked, were not very severe. The incisions were made directly over the external ring, and although the sac was opened very little of the intestine was exposed. We saw it for the length of about an inch and it was quite healthy. Plugging the incision with his finger, the operator now reduced the whole without allowing the intestine to escape. The operation was very quickly over and none of the gut had been handled. Symptoms of peritonitis followed forthwith and on the third day the man died. At the *autopsy* we found a free effusion of lymph matting the structures together in the lower part of the abdomen. This is a good example of *direct traumatic peritonitis*.

matic peritonitis. It is precisely analogous to that which may follow accidental wounds and certain operations, such as that of ovariotomy, in which the peritoneal cavity is opened. With regard to hernia, all risk of it is prevented if the operator avoid opening the sac. The second source of danger is one, however, which you can not thus avoid, but which attends almost equally those in which the sac has not been opened and those in which the more serious operation has been adopted; it even attends cases in which the taxis has been successful without operation, if the hernia have been tightly strangulated for several days.* Were it not that we but very seldom succeed by the taxis after long and tight strangulation, I feel sure that cases of death after such success would be not infrequent. The cause of danger to which I now allude is that peritonitis may be set up by the knuckle of inflamed gut which has been triumphantly returned into the abdomen. It is not only when the portion of bowel which had been down becomes gangrenous and gives way that it may cause inflammation; in conditions much short of absolute sloughing it is still capable of causing inflammatory action in the serous membrane with which it may come in contact. The case which I have already detailed is an example in proof of this. I have shown you the portion of bowel, and you have seen that it is not perforated.

Let us suppose that in one of Mr. Travers' experiments just before the gut gave way and an artificial anus formed he had liberated the ligature and returned the intestine into the abdomen—should we not have had under such circumstances every reason to expect peritonitis? Yet this is pretty much what occurs when we succeed in reducing, whether with or without operation, a long and tightly strangulated hernia. When we return into the abdominal cavity a knuckle of bowel in a state of advanced inflammation with flakes of lymph adhering to it, and with spots which are approaching gangrene), the peritonitis which is certain to result may be either local or diffused. If the patient be a good subject, the lymph effused closely adjacent to the source of irritation may rapidly organize, and wall off from the general cavity the part in which morbid processes are occurring. Under less favorable states, however, the inflammation spreads widely and quickly, a soft buttery exudation is effused, which does not organize well, and under the shock to the vaso-motor centers, which general peritonitis always causes, the patient sinks. Of this latter event I have quoted an example; of the former we had a very good instance in the case of Mrs. Boyd, who is still in the hospital. In this latter case I operated for a strangulated femoral hernia under urgent conditions. The bowel had been down more than three days,

* During the last few years I have lost two patients after reduction by the taxis. In one, an old lady had concealed her ailment, and when I saw her in consultation she had suffered from strangulated hernia for nine days. Unexpectedly I reduced the hernia by a very slight effort. She sank the next day, and we did not obtain a *post mortem* examination. The other case occurred in the hospital; a house surgeon reduced a femoral hernia of four days' standing. The woman died of peritonitis four days later.

the symptoms were severe, and the skin over the tumor was dusky and œdematous, I did not even attempt the taxis, nor did I try to avoid opening the sac. On the contrary, much fearing that the intestine was already gangrenous, I at once cut down into the sac, and having opened the latter cavity freely and divided the stricture, I drew down the gut, and examined its state above where the constriction had pressed. Although deeply congested it was in much better condition than I had expected, and there was no evidence of gangrene. We determined accordingly to return it, and this I easily did, putting the knuckle of gut and a portion of omentum back into the peritoneal cavity. Anticipating peritonitis almost as a matter of necessity, I prescribed a pill, containing a grain of calomel and a quarter of a grain of opium, to be taken every three hours, and commenced directly after the operation. These pills were steadily continued until the third day, when the woman's mouth was sore. She had been in a low condition with some abdominal tenderness, but no very urgent symptoms. From the day that her mouth was touched she began to improve; she had less pain in the belly, and more appetite. From this date she steadily progressed nothwithstanding what I am about to relate, and she ultimately made a perfect recovery. On the tenth day after the operation, feces appeared in the discharge from the wound, and during the next few days the flow was very free indeed. A little later a mass of gangrenous tissue showed itself, which I drew out with forceps from within the abdominal cavity. It proved to be the fold of omentum which had been strangulated, entirely deprived of its fat, and reduced to a mere web of serous and areolar tissue. It represented, however, when unfolded a portion nearly as large as one's hand. When the fecal fistula first formed the woman was quite free from symptoms of peritonitis, her abdomen was lax and soft, and she had a good appetite. I was able, therefore, to assure her that this symptom, which to her appeared so alarming, was of no real consequence, and that I felt confident she would recover perfectly. The result was that the fistula closed in about three weeks. The wound is now healed, and she will shortly leave the hospital. Now let us try to realize what must have been going on in this patient's abdomen during the first few days after the return of the damaged intestine and omentum. How large a cavity must have been securely walled off from the general serous sac in order to permit with safety of gangrenous detachment of so large a portion of omentum, as well as of perforation of the gut itself. [I may just remark that there was in this instance not the slightest doubt about the complete reduction of the parts concerned, and that they did not afterward come down again, until, as above described, the gangrenous omentum showed itself]. How narrow must this woman's escape from diffuse peritonitis have been! It is clear that the inflamed and vitally damaged structures caused the inflammation by which they were themselves encysted. Had the woman been the subject of kidney disease, or one of those in whom, from some unknown peculiarity, all inflammations tend to become diffuse rather than adhesive, she would, in all probability, have died of peritonitis on the second or third day. Without venturing to assert that it assisted, I can not help asking your attention, in passing, to the fact that

the mercury, which was pushed to salivation, did not prevent the rapid formation of efficient adhesions.

Unfortunately for our hernia statistics, in the majority of patients, the diffuse form of peritonitis is more likely to occur after the introduction of an irritant than the adhesive and protective process. Hence the great frequency of deaths from peritonitis after our operations. In a few cases this peritonitis is due to the wound itself, *directly traumatic*, and in others, the majority, it is due to the effect of the returned knuckle of damaged bowel acting as an irritant of the most efficient and deadly kind. In some cases the peritonitis may be in part traumatic and in part due to the returned structures.

From these arguments two or three rules as to practice seem to evolve themselves. In the first place, we see clearly how it is that the expectations of the early advocates of the operation without opening the sac, have not been fully realized. In avoiding to open the sac we only escape one form of danger, while, in many cases, we encounter another. It is clear that this operation should be reserved for recent cases only, and for those in which we entertain no apprehensions as to the state of the gut. In other cases it is much better to open the sac and examine the gut. The next inference seems to be, that it would frequently be good practice to leave the intestine unreduced (after free division of the structure). Most surgeons reserve this plan for cases in which the gut is either absolutely gangrenous or evidently about to become so, for cases, in fact, in which they fear actual perforation and extravasation of contents. If, however, we regard damaged intestine as in itself a source of danger, although the damage may be much short of gangrene, we shall be prepared to admit that in many other cases this plan would be the wisest that we could adopt. How to choose the cases is the great difficulty, and there is no single point in surgical practice requiring more judgment and experience. If a case ends fatally, in which the intestine has been left in the sac, the surgeon will always feel that he is open to the suggestion, that the result might have been otherwise had it been reduced; whereas if the same event follows a completed operation there will be a general impression that all had been done that could be done. The very large mortality which still attends our hernia operations is, however, a matter deserving most serious investigation, and I am sanguine that I have directed your attention to one of its chief causes. I can not close the lecture without adverting to the all-important point in the treatment of strangulated hernia—the danger of delay. From whatever point of view we look at the subject, this fact stares us in the face. It is the cases of prolonged strangulation which are dangerous. A surgeon in charge of a recently strangulated hernia should allow himself no rest until it is reduced; without an operation, if possible, with one, if success can not be otherwise had. I dare not speak so lightly as some have done as to the dangers of the operation, being convinced that traumatic peritonitis does not very unfrequently follow as its direct result; but this we must all admit, that in comparison with the risks attending delay, those of the operation are as nothing.

The following, then, are the chief conclusions to which I have endeavored to point in this lecture:

1. That peritonitis very rarely occurs before either the operation is performed or taxis effected.

2. That it is the common cause of death after operations, and is even now and then met with after successful taxis.

3. That two forms occur after operations, one when the sac has been opened, due to the incision, handling, etc. (direct traumatic); the other, whether the sac has been opened or not, due to the return of damaged intestine into the peritoneal cavity.

4. That a knuckle of intestine, which has been damaged by strangulation, but is yet much short of actual gangrene, may originate the second form of peritonitis.

5. That the knowledge of the true cause of the commonest form of post hernial peritonitis, explains why death often occurs, even when the sac may not have been opened. That it also points to several important practical conclusions: (*a*) The extreme value of time in a case of strangulated hernia. (*b*) The necessity for opening the sac and examining the gut in cases of long strangulation. (*c*) The propriety of retaining the damaged gut in the sac if found in a bad condition. (*d*) The propriety of adopting by anticipation the treatment for peritonitis, if inflamed bowel have been returned.

[*London Hospital Reports*, Vol. II.

A surgeon of some eminence in his profession at Ghent has recently published an account of a method of treating wounds with dressings of sheet lead. From the 1st of January, 1864, to the end of May, 1866, Dr. Burggraeve has treated two hundred and thirty-six cases in this manner, and only eight deaths have occurred. His process is exceedingly simple. It consists in washing the wound carefully with lukewarm water, and then covering it with pieces of sheet lead, which are secured with adhesive plaster. Most of his patients have been workmen injured by machinery, and were too weak to undergo operations, owing to the impoverished state of their blood. "The wound," says M. Burggraeve, "whatever may be the amount of contusion, crushing, or laceration is first washed carefully without detaching or cutting away any portion of flesh, since in the state of torpor it is impossible to say at once which will mortify and which may be preserved, and one runs the risk either of cutting away too much or too little. It is next surrounded with thin slips of lead, retained in position by sticking-plaster. From time to time a jet of warm water is injected under this armor, if we may use this expression, so as to remove the ichor and refresh the parts." In order to watch the progress of the wound, each sheet of lead may be removed independently of the others. The contact of the metallic lead with the flesh causes no irritation, and the rigidity prevents friction, and excludes the air, a very important point. Besides the mechanical action of lead, Dr. Burggraeve thinks that it may also be attended with some physical action, and quotes the well known effects of Goulard's extract. The author enlarges on the value of this method of treatment in military surgery, where operations must, at least in active service, be somewhat hurried, and many a limb which under ordinary circumstances, might have been preserved, is sacrificed in consequence. Gun-shot wounds, he says, have much analogy with injuries caused by machinery, and we may reasonably assume that the results will not be dissimilar. Whatever the theoretical objections to lead bandages may be, they appear at all events to have had a fair trial, and to have been productive of good results.—*London Leader.*

OBSTETRICS, DISEASES OF WOMEN, MATERIA MEDICA, AND THERAPEUTICS.

By THEOPHILUS PARVIN, M. D., Professor of Materia Medica and Therapeutics, Medical College of Ohio, and Clinical Lecturer on Diseases of Women at St. John's Hospital.

ART. I.—*Mammary Inflammation and Abscess.* (As met with at an early period after parturition). By J. R. WEIST, M. D., Richmond, Ind.

There is, perhaps, no disease belonging properly to the post-partum woman, that, involving no greater danger to life, causes the patient so much distress, and the physician so much trouble as mammary inflammation, and mammary abscess. That a woman, after safely passing through the pains and dangers incident to labor, and enjoying a period of comparative comfort, should be seized with an inflammation of one or both of the mammary glands, that shall go on to a tedious, painful, and protracted suppuration, is particularly unfortunate; and believing that the most correct practice does not generally obtain in cases of mammary inflammation, where suppuration is threatened, I am induced to write this paper.

The beginning of this trouble is generally considered to be in the irritation and congestion of the gland which takes place when the secretion of milk is formed. If these exceed certain limits, instead of the secretion becoming established after one or two days' feverishness, the breast becomes hot, painful and tense. When, if active interference be not instituted to reduce this extreme irritation, it will go on into inflammation and abscess—therefore the books direct that the most important thing to be done, in the beginning of such threatened trouble, is to keep the breast *well emptied*, allowing no acummulation of milk to take place in the milk tubes; but if our efforts are vain in this direction, and the difficulty continues to increase, we may bleed the patient generally, or do the same thing locally by applying leeches to the inflamed organ, following with poultices, fomentations, or evaporating lotions, exhibiting saline cathartics and keeping the patient upon an unstimulating diet.

Ramsbotham* says that inflammation of the mamma most frequently originates from undue accumulation of the secretion within the lactifer-

* "Obstet. Med. Surg." page 482.

ous ducts themselves;" and to arrest the threatened inflammation, "it should be the part of the medical adviser to depict the danger honestly likely to result, and strongly to urge the necessity of the bosom being perfectly emptied." If inflammation supervene he recommends that recourse be had to leeches, brisk purgatives, poultices, and fomentations.

Churchill,* in speaking of "the irritation and congestion which take place for the secretion of milk," says that when they may be undue in amount, "the breast becomes hot, tense and painful," and then says, "this excessive congestion may be regarded as the most frequent cause of mammary abscess, soon after delivery, and with first children." His treatment is similar to that of Ramsbotham given above, with the addition of tartar emetic.

Meigs† believes that the distension of the "milk tubes" is the principal cause of mammary inflammation and abscess, and insists that the thing above all others to do, is to get the milk out of the breast, and to keep it out.

Bedford‡ states that in his opinion "mammary abscess in nineteen cases out of twenty, is the result of carelessness. It may be produced by cold, or a slight blow on the breast," etc.; that according to his experience "the most prolific cause is neglect in not having the breast properly drawn, ... if, therefore, the child be unable to sufficiently disgorge the breast, have a young pup obtained; this latter is worth all the machines ever contrived for the purpose of drawing the mammæ."

This author also believes in fomentations, poultices, saline cathartics, with "tolerant doses of tartarized antimony," etc.

Hodge,§ in speaking of this disease uses the following language: "Mammary irritation and congestion which is apt to supervene on the fourth day (after delivery) may be moderated by the previous exhibition of laxative medicines, but especially by putting the child early to the breast, and allowing it no other nourishment but the mother's milk. Should the congestion be inordinate, suckling, not only by her own infant, but by another child, by the nurse, or by artificial means will be important, care being taken not to injure the breasts by undue manipulations, or by pressure from the clothes of the patient. The effect is increased by warm fomentations, poultices, etc., and sometimes by leeches." "Anti-febrile remedies, including not only leeches but the lancet, are sometimes demanded if the milk fever be great."

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*"Diseases of Women," page 699.
†"Woman and her Diseases," p. 659.
‡"Obstetrics," pages 426–7.
§"Obstetrics," pages 209–10.

Such are the opinions held by some of our most eminent obstetricians, and it will be seen that they all give prominence to the idea that retention of the milk, and the consequent distension of the breast, is in almost all instances the cause of the inflammation. This is the popular notion, and the one almost exclusively held by the majority of the profession, and seems to be the last lingering remnant of the old doctrine which ascribed many puerperal diseases to the morbific action of the milk. "Hence puerperal insanity was designated *mania lactea;* secondary pelvic inflammation, or pelvic cellulitis was a *depot laiteux,*" and phlegmasia dolens was the "*milk leg*" of the older pathologists: but as these notions and names have passed away under the teachings of a more correct pathology, we may hope that more rational views concerning the disease under consideration will ere long prevail.

In consequence of the general belief that the beginning of mammary inflammation and consequent abscess, is to be found in the distension of the breast with milk, and that therefore the proper way to avoid trouble is to keep the breast clear of it, a patient often goes on something like this: After a certain number of hours or days after delivery, a woman has slight rigors followed by more or less fever, with pain in the head, spine and limbs. There is also pain of a shooting kind in the gland, which is increased by handling the organ and the nursing of the child. Her nurse or some good old lady tells her that she has "*the weid*" in her breast, and must draw off the milk. The child is put to the breast and the poor woman exhausts herself in fruitless efforts to make the child suck, for, as usually happens, the child can not unload the distended milk tubes, and after a time becomes instinctively disgusted, and will make but little effort at nursing. The baby is scolded for not doing its duty better, and the trouble increases. Three or four sympathizing lady friends who have babies that they are sure will be able to get out the milk, have them successively applied, while the patient with tears in her eyes, suffers the pain caused by their rough manipulations about the tender breast. The babies failing to accomplish the desired result, if a blind puppy can he found in the neighborhood, his aid is invoked; relief not following, the doctor is then probably sent for—he being well posted in the treatment advocated by Meigs, Bedford, Hodge, *et. al.*, feels the patient's pulse, inspects the tongue, fingers the inflamed breast, looks wise, and gravely announces that the milk must be drawn from the breast, and when informed of the ineffectual efforts that have been made, advises that some abomination in the shape of a patent *breast pump* be obtained, never remembering that the breast pump devised by the great Master above, is a much more perfect instrument than any

arrangement of rubber and glass devised by man's ingenuity. This probably also fails—the lotions and poultices that the doctor orders, fret and disgust the woman, while his cathartics and antimony, make her sick—and the result is, that unless she has sufficient resilience to overcome the disease in spite of the treatment pursued, she gets suppuration of the breast with all its accompanying and disgusting series of poultices, and protracted pain and exhaustion.

I will now adduce some of the facts that lead to the conclusion that simple distension of the lactiferous ducts, is not the cause of mammary inflammation and abscess.

In none of the mammalian animals, except man, so far as my information extends, is the female a frequent subject of mammary inflammation and abscess. Almost daily observation teaches us that this statement is true, so far as the more common domestic animals are concerned. When the cow is separated from, or loses her young, mammary abscess almost never occurs, and when it does, it is not in the case where milk has *not* been drawn from the udder, but in the case where it has been removed by man. Every one who has resided in the country is familiar with the fact that from various causes these animals sometimes go unmilked for days. Yet who ever met with a mammary abscess in such cases? Yet the lactiferous ducts often become most enormously distended, as all know.

The same observations will apply with equal propriety to the horse. But if the objection is made that in the case of the animals mentioned, we often relieve the distended gland by removing the milk, I will instance sheep, swine, dogs and cats, where the objection can seldom or never apply. Yet, among the animals mentioned, it is well known that while large accumulations of the lacteal fluid take place, inflammation and abscess almost never occur. All these cases are legitimate sources from whence to derive conclusions that will apply to the human female, for among all mammals the lacteal organs in their glandular and specific anatomy are essentially the same.*

In the human female mammary abscess seldom occurs when the child is born dead, or when the child dies, and no other exciting cause

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* Since the above was written, I have learned that Prof. T. Parvin, in a paper read before the Indiana State Medical Society in 1865, advocated the same doctrines as are contained in this paper, and drew conclusions from observations on domestic animals similar to mine. I am sorry not to have seen this paper. As it is, I only know of it through a friend. I do not know that it has ever been published.

J. R. W.

of inflammation than distension is present. Ramsbotham, although holding the doctrine, as we have seen, that this disease usually results "from an undue accumulation of the secretion in the lactiferous ducts," recognizes this fact, but fails to make the proper application. He says,* "it is seldom that a woman who declines nursing altogether becomes the subject of suppurating mammæ. I can not call to mind, indeed, a single instance of this occurrence in my practice. This is exactly contrary to what might have been expected. We should have supposed that the milk, having been secreted, and stagnating in the ducts until it was removed by absorption, would have caused so much irritation as to excite inflammation and the suppurative action frequently; and we should have looked for this complaint, particularly in those cases where the child was still-born, or had died soon after labor; or where, for convenience sake, an attempt was made to suppress the secretion." Now in all these cases a greater or less degree of distension must occur, therefore, it is evident that *some other cause* than this must come into action when inflammation and abscess occur.

Dr. McClintock, in a paper read before the Surgical Society in Ireland, 1866, uses the following language:

†"I have very rarely known inflammation and abscess to result from distension alone, and where there was no irritation of the nipple, nor abscess in the breast before. Neither do I recollect ever seeing mammary abscess in a woman whose child was dead-born; or supervening upon the death of a nurseling, when no other exciting cause of inflammation was present. And yet in all these cases the gland is subjected to considerable distension."

If then, contrary to the common belief, mammary inflammation and abscess are not usually caused by distension of the breast with milk, as I think we may safely conclude, what then must we assign as the cause chiefly operative in bringing about this unfortunate result? *Chiefly the persistent efforts made to draw off the milk from the distended gland*, and therefore it may be safely affirmed, that instead of mammary abscess being "in nineteen cases out of twenty, the result of carelessness," in not drawing off the milk, as Bedford believes, it probably occurs in nineteen cases out of twenty from officiousness "in using every means natural and artificial to draw the breasts." "The natural effect of which," to again quote from Dr. McClintock, "is to insure the occurrence of what is so much dreaded."

Denman has remarked that the state of pregnancy, though not exactly

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*"Obstetrics," page 481. †"Amer. Med. Journal," July, 1860, page 248.

one of disease, yet borders very closely on it. This observation is applicable to every organ influenced by pregnancy, either directly or through sympathy. The mammary glands "become the seat of increased vascular and nervous activity," or, in other words, are in a state of physiological irritation, that very slight external injury may convert into a pathological condition; whence serious inflammation and suppuration. This being the case, when such conditions arise, after the rough manipulation the tender and irritated gland has received, it is illogical to attribute their occurrence to a retention of milk or obstruction of the lacteal ducts.

The bearing of these views upon practice, is sufficiently obvious. If they are correct, the practice recommended by the books will be not only not good treatment but treatment in the highest degree mischievous; consequently my idea of good practice in such cases is one that recognizes clearly and distinctly the necessity of no active interference, and that ignores fomentations, poultices, cathartics, leeches, antimony, "pups" and breast pumps.

In treating a case of threatened mammary abscess, I would use an anodyne in sufficient quantity to give my patient comparative freedom from pain, and apply locally, once in five or six hours lin. saponis or fluid extract belladonna, or a combination of the two, having them very gently applied with the fingers to the inflamed gland, and completely interdict all attempts at removing the milk by artificial means. In addition to this, I would do nothing.

The local applications are advised not because of a belief in their efficacy in resolving the inflammation, but because they serve to satisfy the demands of the patient and her friends. For the greatest trouble met with in treating these cases comes from the difficulty in satisfying these parties that it is not necessary to draw the milk from the breasts, or to use a great variety of local applications supposed to possess the power of suppressing or lessening the secretion.

The external application of extract of belladonna has been much praised during the last few years, because of its supposed power to hasten the absorption of the milk. My own experience leads me to the conclusion, that the favorable results following its use are fairly attributable to the quiet the breast usually enjoys when it is applied, and the absence of the injury done, when other methods of treatment are employed, and not to any specific quality possessed by the medicine. The anodyne effect resulting from its absorption into the system when thus applied, is favorable to the extent it relieves pain.

The following cases are presented as illustrating the results following the practical application of the views presented in this paper:

Case 1.—Mrs. F., after confinement with her first child, suffered from severe mammary inflammation, and although natural and artificial means were employed to remove the milk, protracted suppuration followed, involving both breasts. After recovery the glands were left in bad condition, with large and hard cicatrices and retracted nipples. On the third day after confinement with her second child, both breasts became enlarged, tense, hot, and extremely painful. She and her friends were satisfied that she was destined again to suffer from mammary abscess. Being satisfied from former experience in her case, that an attempt to remove the milk from her breasts would not only give her great pain, but end in failure, I determined to make a trial of the local application of extract belladonna. The solid extract was reduced with glycerine, and both breasts painted with it *once*. No effort was made to draw the breasts, and nothing else was done for the patient's relief. Yet in three or four days all the pain and irritation had vanished, and although she afterward nursed the child, the trouble did not return.

In this case I was at the time disposed to ascribe to the belladonna the favorable result, but I now believe that it was in a much greater degree owing to the absence of the rough treatment formerly employed.

Case 2.—Mrs. W., after her first confinement had the worst mammary abscess that I have ever seen. The left nipple was retracted, and when the breast filled with milk it was impossible to remove it by any of the means employed, although long-continued efforts were made. The consequence was that extensive suppuration and sloughing followed, from which the patient was confined to her room for two months. After the birth of her second child, the left breast again assumed a threatening condition, and it did not seem possible that suppuration could be avoided. The same plan of treatment was adopted as in the former case, and within four days all pain and soreness had subsided, and no further trouble or secretion occurred in the gland. The child was nursed from the right breast.

In this case I am entirely satisfied, that had the former plan of treatment been followed, so favorable a result would not have been obtained.

Case 3.—Mrs. T., after the birth of each of her three children, had been the subject of mammary abscess affecting the right breast, although each time many efforts were made to relieve the distended gland by drawing the milk.

Soon after her fourth confinement, appearances indicated that she

would not this time escape a like trouble. No attempt was made to remove the secretion. Quiet was enjoined, and the areola of the affected gland painted once with fluid extract belladonna. All trouble rapidly disappeared, and the secretion of milk became well established in both breasts.

Dr. Jas. F. Hibberd, of this city, has kindly furnished me the particulars of the three following cases of threatened mammary abscess, occurring in his practice during the last three months.

Case 4.—Mrs. ———, aged forty, was delivered of twins, one of which was still-born. The nipple of the left breast was imperfectly developed to so great a degree that the child could not nurse from that breast. She had borne children several times before, and after each previous labor, persistent attempts had been made to relieve the distended gland by drawing the milk. Yet each time did she suffer from extensive and protracted suppuration of the gland. Three or four days after her confinement this breast became distended, hot and painful, while she, remembering her former painful experience, was in almost an agony of fear, being convinced that she was again to endure the torture belonging to mammary abscess. Although the gland was greatly distended no effort was made to draw off the milk, doctor and patient being fully convinced that harm would come from any effort made in that direction. Sufficient sul. morphia, to take of the sharpness of the pain, was exhibited, and the following liniment ordered as a local application:

℞ Lin. Saponis, ℥i.
Fl. Ex. Belladonna, ʒss.

S. Apply to the sore breast with the fingers once every three or four hours.

No other treatment was instituted, and the result was that in a few days all the distension, tenderness and pain, passed away, not to return during lactation.

Case 5.—Was a case of delivery at the seventh month, in second pregnancy. The first pregnancy having resulted in premature labor at the same period, followed by a very bad mammary abscess in one breast. Great irritation and distension of the breasts followed at the usual period. Any attempt at drawing the milk was interdicted, and the same treatment adopted as in the former case, with a like good result.

Case 6.—A young woman was prematurely delivered of a still-born child, at the seventh month of her first pregnancy. The mammary glands became greatly distended very early, and suppuration was strongly threatened. No attempt whatever was made to draw the breasts, and

the only treatment instituted, was a single application of fluid extract belladonna, to the areola of the enlarged glands, followed by the same liniment used in the former cases, yet the threatened suppuration did not occur.

Dr. H. is strongly impressed with the idea that had the usual plan of treatment been followed and efforts made by artificial means to relieve the distended breasts by drawing the milk, mammary abscess would have followed in each of the cases reported. He does not attribute any great virtue to the local applications used, aside from the effect of satisfying the mind of the patient and her friends, but believes that the most important part of the treatment consisted in letting the breasts alone.

Case 7.—Dr. W. P. Waring, of this city, informs me that he lately had charge of a lady during and after her confinement with twins, who died soon after birth. Her breasts became greatly distended a few days after delivery. Although the danger of suppuration seemed imminent, the importunities of the patient and her friends to have the breasts drawn were resisted, and *nothing whatever* was done for the breasts, yet all the trouble soon passed away greatly to the relief the patient and the satisfaction of the doctor.

ART. II.—*Pereira's Materia Medica Abridged.* Manual of Materia Medica and Therapeutics.—Being an Abridgment of the late Dr. PEREIRA's Elements of Materia Medica.—By FREDERICK JOHN FARRE, M. D., F.L.S., etc., assisted by ROBERT BENTLEY, M.R.C.S., etc, and by ROBERT WARRINGTON, F.R.S., etc.—Edited, with numerous references to the U. S. Pharmacopeia, and many other additions.—By HORATIO C. WOOD, M. D., Professor of Botany, University of Pennsylvania, etc.—Philadelphia, HENRY C. LEA, 1866.

The merits of Pereira's Materia Medica are so well known as neither to require nor permit any exposition of them at this day. Unfortunately, however, the work was too expensive to be in the hands of all medical students, and possibly too complete and copious to be well studied by a majority of those who did possess it. But now each difficulty is obviated, and we have here presented in a volume of a thousand pages, type, paper, *et cetera*, doing abundant credit to Mr. Lee, that which we sincerely believe the best work on *Materia Medica* in the English language. No physician, no medical student, can purchase this book, and make anything like a proper use of it, without being amply rewarded for his outlay.

Nevertheless, other volumes, perchance, are superior to this in the *thera-*

peutical aspect of the question. We mean, for example, the philosophic and scholarly discussions of "Stille," and the wonderful variety and minuteness of information in therapeutics which "Waring" furnishes; and besides, we sometimes miss the impress of personal observation and experience, careful and accurate beyond the power of casuist to dispute, which so marks so many of the therapeutical statements of "Garrod's Essentials." Dr. Farre, the English editor, and Dr. Garrod, are both physicians to important London hospitals, and lecturers on Materia Medica, in London medical schools. Let a person go to St. Bartholomew's, and listen to Dr. Farre: he will see a man of dignified appearance, of fluent mechanical utterance, lecturing to an uninterested class, some so little interested as to be rude and disorderly: yet the facts communicated by the lecturer are valuable, but they are mainly second-hand facts. They are animated by no spirit of personal experience; the manner is unexceptionable—voice, tone, gesture, none would find fault with them.

Then let our visitor find his way to "King's," instead of Dr. Farre's large class—there is a class not half so large, but no symptoms of disorder, of the least impatience, or weariness, but all listening attentively to a man of rather diminutive size, without either dignity of form or bearing, without oratorical graces, and even with a voice so low and so badly managed that with the best efforts at attention, some words are lost every few sentences. Are we wrong in attributing the difference with which the instructions of these two men are listened to, to the fact that the one is, in the main, but the echo of other's experiments, experiences and observations, while the other draws so largely upon his own personal knowledge and investigations in chemistry, pharmacy and therapeutics, so that to use the language of a friend, an able physician of Glasgow, "Dr. Garrod is the best teacher of Materia Medica in the three kingdoms?"

However, returning to the volume before us, we believe that Dr. Farre has here done his work faithfully, and in the main satisfactorily, ably assisted as he has been by Mr. Warrington and Mr. Bentley. Nevertheless we shall offer some criticisms that we have found occasion for in hastily glancing over the book—criticisms that we think will be regarded as just, and pertaining both to the work of the American as well as the English editor. In regard to the former, we believe it quite a compliment that he should be chosen to prepare the volume for American students and physicians; a choice, which the sequel proves to have been eminently proper. So much in general.

Now, as to some details. Under the head of carbonic acid, we find no mention made of its value as a local sedative, especially in painful affections of the uterus. Dr. Duvall first recommended it in cancer of that organ, and in recent years Prof. Simpson has revived its use, in that disease, and also given it a much wider range of application; thus we have seen him use it in a case of chronic cough, with the most marked benefit.

Under the head of *iodine*, we ought to have been informed of the great value of inhalation, with each nostril, of the tincture from an open vial—the warmth of the hand used to volatilize its contents—in the treatment of

coryza, ozna and hay-asthma, *especially the last*: we look upon such use of iodine as one of its most important.

The dose of bromide of potassium is given as four to ten grains three times a day. The American editor refers to its use in epilepsy, and speaks of "forty to sixty grains" being exhibited in the twenty-four hours.

The readers of this Journal need not be informed that those who have had much experience in the treatment of that disease, push the quantity much beyond either of these amounts.

Under the heading of *mercury*, we are informed that it is advantageously employed in *hepatitis*. But how—for its *specific*, or for its *cathartic* effect? Contrast this advice with the following passage from the third edition of Aitken's Practice, p. 817: "One practical rule seems to be established with respect to the use of mercury in the treatment of hepatitis, which is, that it is not only inefficient, but injurious, and should not be given except as an occasional purgative." We are surprised to find no mention made of chlorate of potash as a remedy, nay, *the* remedy for mercurial salivation; but we are still more surprised that *mercurial fumigation*, the value of which in the treatment of syphilis has been so well established in recent years by Mr. Henry Lee, is not fully considered.

The editor, Dr. Farre, speaks of his having found strychnine, or extract of nux vomica, a valuable addition to some purgatives in intestinal torpor. Considering this has been known for more than twenty years, we might have been spared such announcement as of an original observation in the year of our Lord 1866. Dr. Farre will probably next announce that he has "found" that sulphate of magnesia is a cathartic!

Under Indian hemp, we learn nothing of its use in the form of tincture, so strongly admired by Dr. Churchill and others, in the treatment of menorrhagia; nor under that of *arnica*, anything of its use in *tinitus aurium*, as recommended many years ago by Sir Wm. Wilde.

Surely, we might have had, at least, a note from the American editor on local anæsthesia by the atomization of ether, or other similar medicine.

Dr. Wood is quite confident of the value of muriated tincture of iron, as proposed by Mr Bell, of Edinburgh, some fifteen years age, in the treatment of erysipelas—"one hundred cases," and only "two of them fatal." Such arithmetic seems conclusive. But on the other hand we should remember erysipelas varies in severity at different times; and that at any rate the general tendency is to recovery: "Even when the scalp is extensively invaded, death from erysipelas is a rare occurrence. On going round the wards of Hôtel Dieu, in May, 1851, with M. Louis, I saw several severe cases of erysipelas of the scalp, which, I was told, were under no treatment whatever, because, as M. Louis informed me, according to his experience, erysipelas of the scalp was *never* fatal, unless it occurred in individuals of bad constitutions, or was associated with some complication." (*Principles and Practice of Medicine*, 4th edition, by John Hughes Bennett, M. D., Edinburgh, 1865.)

Doubtless many who suffer from erysipelas are benefited by the tincture of iron; but to claim this as a universal remedy for the disorder—to make it

an erysipelas-specific, we believe is unwarranted by experience, and at the same time is not in accordance with sound pathology or therapeutics. Our own belief is that the value of iron in erysipelas has been greatly exaggerated; we protest against treating a disease by its name, and against too liberal a faith in specifics, and we urge *attention to constitutional states, rather than to local manifestations.*

Time will not permit us to continue this examination, although we had intended reference to some other points. There are some typographical errors which will hardly be repeated in a future edition, which, we do not doubt, will soon be demanded. For example, Pythagorus on p. 361; on page 873, "the taste of its goodness is to be looked for in its freshness, taste and odor;" more than once we find Torrey spelled Torry.

In conclusion, we reiterate our high appreciation of the book, commending alike the work of the American editor and published.

ART. IV.—*Confirmatory Evidence of the Value of Arsenic in Hemorrhoids.*

In the March number of this Journal we called the attention of the profession to this new application of arsenic.

We have just received from an intelligent medical friend, of long professional experience, the following note which confirms the statement made by us at that time.—[ED].

Dear Doctor: Some eight weeks ago I had an attack of hemorrhoids, which so far incapaciated me for any physical exertion that the exercise of carrying the least burden, or even continuous walking for any length of time, would be the cause of great pain and external tumefaction. Having had, within the last twelve years repeated attacks of the kind, which were only relieved by nature's dangerous method, *suppuration;* or by extensive local depletion by leeches or the lancet, I expected in this instance, a like termination. About two weeks ago I concluded to try Fowler's solution, though I must confess with only the slightest degree of faith in its efficacy. I used ten drops of it three times a day. On the third day I felt partially relieved, and four days after was fully restored.

I know the import of the *post hoc a propter hoc* fallacy in reasoning, have heard say that it takes more than one swallow to make a summer, and am as slow of belief in new remedies as any one, but I am fully persuaded that I have been relieved of this most troublesome disorder by the agency of the arsenical solution so timely brought to light in your valuable Journal.

J. C. B.

ART. III.—*Book Notices.*

Why not? A Book for every Woman. By Dr. H. R. STORER. Published by Lee & Shepard, Boston, 1866. This is the Prize Essay to which the American Medical Association awarded the gold medal for 1865, and which, by order of the Association is issued for general circulation.

We regard this little volume as excellent in design and execution, timely in its issue, and worthy of a wide circulation.

We are satisfied that means to prevent conception are *very frequently* resorted to, especially by married women in the so-called middle and upper classes of society—those who have the least excuse in poverty or physical toil for evading the law of their social state—and that, especially in the same classes, criminal abortions are by no means uncommon. Sometimes these abortions are the results of self-inflicted violence, of long walks or other *purposely endured* fatigue; sometimes they are produced by nominal doctors, men "who steal the livery of heaven to serve the devil in," the pupils of all sorts of heterodoxmedicine; and sometimes the agents in the murderous work—it is painful to record the repulsive and shocking truth—are members of the regular profession. Instances of the latter sort, happily rare, are known to almost every medical gentleman, known by proofs conclusive to his own mind, but unfortunately seldom so available and clear as to establish the charge beyond all peradventure in a court of justice. And here we can not but commend the manly action recently taken by the Medical Profession of Richmond, Ind., in reference to one of their number, guilty of this abominable crime. *The example set by these gentlemen is worthy of imitation in some other towns we know of.*

However, we will accomplish much to prevent the resort to abortion, no matter by whom the wickedness is effected, by diffusing among females just and intelligent views of its criminality and danger. Now one of the best means to attain this, will be to encourage the circulation of "WHY NOT?" We will not say it ought to be on every parlor table; but we will say it ought to be in every married woman's chamber, so that, whenever tempted to violate "her lot to bear, to rear, to love"—whenever tempted to impair her health, to peril her life in efforts, sometimes futile, so far as intended result is concerned, at child-murder—this may be her *bible* of appeal, of *instruction and of warning.*

Sims' Uterine Surgery.—Wm. Wood & Co., No. 61 Walker street, New York.

Other engagements have so long delayed our notice of this book, that it is too late to make it the subject of extended remarks.

This work is marked by the ingenuity and industry which so strongly characterize its eminent author; it contains many practical instructions and observations, of which no general practitioner even, still less one who is frequently called upon to treat the maladies peculiar to women, should permit himself to remain in ignorance; it contains, likewise, some few things which no practitioner of any sort would care to put in practice, *e. g.*, "mechanical impregnation," and "ethereal copulation." Not only would no

physician care to repeat Dr. Sims' experiments of this novel sort, but we think the subjects who would submit to such practice would be few and far between; and the inquiry might arise whether christian science had nothing better than this to offer, and whether this was any more worthy our day than the treatment to which sterile women were once subjected among the Greeks—with these, according to Moreau's *Histoire de la Femme*, "the woman who had not borne a child during the first years of her married life went to the temple of Juno in order to receive there from a *lupercal* priest the gift of fecundity. After laying aside her garments, she presented herself to the castigating priest, and received upon all the posterior part of her naked body a shower of blows with a whip of goats-skin thongs."

ART. V.—*Pharmacology of Hypodermic Injections.*—(Jousset de Bellerme). Translated for the Cincinnati Journal of Medicine. By F. B. NOPSINGER, M. D., of Indianapolis, Ind.

Since M. Béhier introduced the method of hypodermic injections into France, the dose of which he has reduced to certainty, since the physiological experience of M. Bernard have shown clearly the advantages of this mode of introducing active agents into the system, many practitioners have had daily recourse to it. M. Jousset has happily resumed these works in a thesis, the most practical conclusions of which we give below.

The sub-cutaneous cellular tissue by reason of its rich capillary net work, rapidly absorbs liquids injected into it. The physiologist then has every advantage, instead of introducing an agent into the stomach, which is often at once rejected, in introducing it in a concentrated solution under the skin.

The operations of the laboratory have gradually led to this mode of practice, and it has thus been ascertained that under uniform conditions, the greatest regularity and the greatest constancy in the results of sub-cutaneous injections are obtained, and to such an extent, that you can be sure with a determined dose to produce a constant effect, and that in a very short time.

In order that any substance may be given in injection, it is necessary that it should be more or less soluable, without which it will be necessary to employ an irritant acid dissolvent—that this substance should not be in itself irritant or corrosive, and, finally, it is all important that no soluble substance should be injected under the skin, which may be precipitated, either by the alkaline chlorides or by the albuminoid substances.

DOSES OF NARCOTICS.

1. ATROPINE.—The dose is from 1-66 to 1-13 of a grain.—(Béhier, Gubler, Moutard, Martin).

2. MORPHINE.—The salts employed are the chlorhydrate and sulphate. You can commence by giving 1-6 to 5-6 of a grain of the chlorhydrate, increasing to 1½ grains, following the degree of endurance.

3. NARCEINE.—The dose of the chlorhydrate of narcine can be carried without danger from 1-60 to 1-15 of a grain.—(Debout, Béhier).

4. STRYCHNINE.—It is necessary to begin with prudence and proceed in progressive doses, from 1-33 to 1-6 of a grain, but *gradually, progressively.*

5. ACONITINE.—Acts energetically in a dose of 1-130 to 1-33 of a grain. It is not prudent to go beyond this dose. (Gubler).

6. CURARE.—The dose can not be stated on account of the variable strength of this substance.

7. QUININE (Sulphate).—Dose from 1¾ to 2½ grains. (Schachaud, Pihan-Defeilhay).

The solution thus far employed (the sulphate in water acidulated by a few drops of sulphuric acid), has serious objections. The question as to the dose has been poorly decided. The subject demands new researches.

8. VERATRINE.—Nitrate of veratrine is injected in a dose of 1-130 to 1-66 of a grain (Bois), a medicament unreliable and dangerous, and up to this time imperfectly studied.

COLCHICINE.—Tried only once upon a goat in a dose of 1-33 of a grain. It produced lively pain without any useful modification. It should be ernounced.

10. DATURINE.—Use six to ten drops of a solution thus formed—5-6 of a grain of daturine to ʒi. of distilled water.

11. CONINE.—Employed by Lorenz (de *Brême*), to reduce the pulse in inflammatory diseases (?) Dose from 1-66 to 1-10 of a grain.

12. NICOTINE.—Employed with success by Erlenmeyer in the following dose: Four drops of a solution of ½ grain of nicotine in ʒij of water.

13. MEDICINAL CYANHYDRIC ACID.—Injection of from 2 to 6 drops in a case of eclampsia. (McLeod, *Medical Times, March*, 1863).

14. DIGITALINE.—Dose from 1-66 to 1-20 of a grain, has been very little employed.

15. ERGOTINE.—Tried by Eulenberg, without success, in a case of obstinate convulsive cough, in a child thirteen years of age—1-20 to 1-10 of a grain was used each day in solution, in a mixture of alcohol and glycerine.

16. CAFEINE.—Dose 1-6 to 1-3 of a grain, continued until it produces headache. (Erlenmeyer and Eulenberg).

17. TINCTURE OF HASCHISCH.—Five to 10 grains of a mixture of equal parts of tincture of haschisch and distilled water. (Thamhayn).

Injections have been tried with emetine, tartrate of antimony, croton oil, chloroform, etc. They are irritants, which lead to inflammation, abcesses etc., and should be banished from the practice.

PRACTICAL MEDICINE, PHYSIOLOGY AND CHEMISTRY.

ART. I.—*On the Treatment of Pulmonary Consumption by Hygiene, Climate and Medicine.* By J. HENRY BENNET, M. D.

So much has been written during the last twenty years on pulmonary consumption by men of the highest order of intellect, that it requires a certain amount of moral courage to enter the arena. No one, indeed, would be justified in so doing, unless he conscientiously thought that he had information to impart calculated to be of use to his fellow-practitioners, and to humanity at large. It is because I believe that such is really my case that I have written the present essay. I have little that is new to bring forward—at least that is new to those who keep pace with the progress of Medicine; but I have important testimony to give in favor of modern science. One who, like myself, has been thirty-two years in the profession, belongs both to the past and to the present, and is able to speak from personal experience of the views and opinions of former days as well as of those of the present time. This fact should give weight to the judgment of an author, who certainly does not appear in the character which, according to the Latin poet, characterizes the later periods of life—that of "laudator temporis acti."

I may, perhaps, lay claim to having had peculiar and exceptional opportunities for forming an opinion respecting the comparative value of the treatment of pulmonary consumption thirty years ago as compared with that now adopted by the leading authorities at home and abroad. My medical education was carried out partly in England, partly in Paris. During four years I was resident medical officer to several of the Paris hospitals, and there gave clinical lectures on auscultation (not then as generally studied as it is now) and on diseases of the heart and lungs to several hundred young English and American medical men; so that I became thoroughly imbued with the knowledge of the day. I may add, that I have ever since remained much interested in thoracic pathology. Later in life, after practicing many years in London, I myself became affected with pulmonary consumption, and, seven years ago, had to abandon everything in order to go and die, as I thought, on the shores of the Mediterranean. Relieved from the fatigue, the harass, and the cares of our arduous profession, I have managed, by the application of modern science, to save my own life, and since then I have helped to save the lives of many similarly affected who have followed me in my health exile to the south.

The great fact to which I have to testify is, that pulmonary consumption is a curable disease—indeed, in its early stages, a very curable disease—under proper treatment. In making this assertion, I have merely to enlarge, and to confirm by matured knowledge, an unpublished paper written in 1840, entitled "On the Curability of Consumption," which I recently found among my manuscripts. At that date I had just passed a year as one of the resident medical officers of the Salpétrière, a large asylum hospital in Paris, more especially devoted to aged and infirm women. There I had found in the dead room, in the lungs of women who had died in advanced life from other diseases, large cretaceous deposits and puckered cartilaginous cicatrices, which proved, emphatically, undeniably, that they had been consumptive at some antecedent period of their life, but had got well, probably spontaneously; dying at last of other disease. Indeed, in those days, the real treatment of phthisis was so little understood by the generality of practitioners, that I truly believe a sufferer had a better chance of recovery if the disease was not discovered than if it was. The low diet, the confinement, the opiates and fever medicines, the leeches and blisters, which constituted the usual therapeutics of such cases, were certainly but little calculated to arrest a disease the essence of which is organic debility. The inhabitants of the Salpétrière are mostly aged women belonging to the lower classes, and the pathological conditions observed were undeniable evidence of their having recovered from an advanced stage of consumption, at some period or other of their life, apparently through the unaided resources of their constitution. Possibly, feeling ill and weak, they had taken refuge with relations or friends in the country, and had gradually recovered under the mere influence of improved hygienic conditions.

In the year 1840, when I thus became aware, from these pathological facts, that pulmonary phthisis is spontaneously curable, it was considered by most of the physicians with whom I had come in contact to be all but inevitably fatal, especially when advanced to its second stage—that of softening. Since then, the same pathological evidences of the spontaneous cure of phthisis have, I believe, been found by all, or nearly all, who have had special opportunity of making post mortem observations in the aged. Among these observers I may more especially mention my namesake, Professor Bennett of Edinburgh, whose luminous work on Pulmonary Consumption, first published in 1852, has much contributed to improve our knowledge of this disease, and of its hygienic management. Moreover, a more rational treatment, founded on a truer appreciation of the nature of the disease, has proved that in

the living, in many cases, when recognized before the lungs are so diseased as to be unable to discharge their physiological functions, this malady is capable of arrest, and even of cure. This I may safely assert is the opinion of all practitioners at home and abroad, whose attention has been specially directed to the subject, and who have had sufficient opportunities for observation to give importance to their views. There are very many, however, who still look upon pulmonary phthisis as incurable or all but incurable, and it is for them more especially that I write.

Pulmonary consumption was formerly considered by most pathologists to be merely a disease of the lungs, having, generally speaking, some intimate connection with inflammation and with inflammatory states. This view has now been generally abandoned, and the most enlightened observers in all countries recognize the fact that this dire malady, by which a considerable portion of the human race pass into eternity, is the result of defective nutrition, a disease of the blood. According to this view, undoubtedly the correct one, the exudation or deposit of tubercular matter in the lungs, and the ravages which it therein causes until it destroys life, are merely the epiphenomena, the secondary results of a constitutional disease, of a morbid general diathesis which precedes, occasions, and rules the tubercular manifestation. Given the tubercular diathesis, the deposit of tubercular matter may take place in any organ, in any part of the body, and there pass through its various stages; but the lungs are its seat of predilection, especially in adults.

In the investigation of the nature and causes of pulmonary consumption, and of tubercular disease in general, we may perhaps go a step further. I firmly believe that the appearance of tubercular deposit ought to be looked upon as the evidence and result of a serious, perhaps final, diminution of vital or nervous energy. In other words, it may be considered the evidence of incipient decay of the organization from defective vital or nervous power. Thus tuberculization, especially when seated in the lungs, is simply a mode of dying. Unless the vitality of the individual can be roused, the morbid condition will surely progress, and life will be extinguished sooner or later according to the state of the constitution of the patient, and of the consequent type of the disease.

The very essence of life is the organic vitality, variable in different species, variable in different individuals, with which each organism, vegetable or animal, merges into being and develops itself. It is owing to inherent organic vitality that the medium duration of life in the oak, the ash, the fir is different, as it is also different in the whale, the ele-

phant, the horse, the dog, and in man himself. The medium duration of life in each species is reached in the organisms that are created under favorable conditions, with unimpaired organic vitality, and that pursue their existence under conditions favorable to life. On the other hand, this medium duration is not reached by those individuals that are created under unfavorable conditions, with defective vitality, or in whom originally sound vitality is modified, diminished, destroyed by the unfavorable conditions in which their existence is carried on.

In such considerations, in my opinion, must we seek for the real explanation of tubercular disease, and especially of pulmonary tuberculization; as also for a key to the types under which the disease presents itself and to the results of treatment. They include, of course, hereditary predisposition.

Viewed in this light, so far from pulmonary consumption being a dire inexplicable pestilence striking indiscrimately the young and the old, it becomes one of the provisions by which Providence has secured the integrity of the human race. If those who are, from birth or otherwise, sickly or weak, in whom vitality is defective originally or secondarily and accidentally, could propagate their kind so that their progeny could live, the human race would soon degenerate and become a race of pigmies, of sickly dwarfs, and eventually die out. Pulmonary tuberculization is in reality one of the diseases by which Providence eliminates those that are weak, imperfect, and consequently unfit to perpetuate the race in its integrity. Individually it may be very hard to be thus eliminated for the good of the human race; but if we rise above individuals and grasp the interests and well-being of the entire human family, it will be seen that these diseases, are, in truth, a bountiful dispensation of Providence. They may be compared to hurricanes in tropical climates, which purify the earth and contribute to make it habitable, although often at the expense of great individual suffering.

A man or woman who is old, who has inherited disease, who labors under disease, or has become weakened by disease, by privation, by cares —parents, in a word, in whom organic vitality to is weakened—can not give strong or even medium vitality to their progeny. No one can give to others what he does not possess himself. It is the same with plants. The seeds of a young vigorous plant produce healthy vigorous plants; whereas the seeds of old, weak, sickly plants produce a like progeny.

The human, like the vegetable progeny, may at first be fair to look at—may appear sound and vigorous; but this state does not last. It is a mere deception; for the inherent, the inherited, vitality is defective.

Such beings are like bad watches, made with bad works. They may look well, and go well for a time; but they soon wear out, go badly, and, if patched up again, get out of order, and finally stop. The good watch, on the contrary, made with good works, will go a hundred years; or, if it accidentally gets out of order, it will go as well as ever when once it has been set to rights. Thus is explained death by consumption at the age of fifteen, twenty, thirty, of young people born with defective vitality, even when brought up and living in favorable conditions for life, and apparently healthy and vigorous. They have thus early exhausted the amount of vitality which they received from their parents; they have used to the last shred their constitutional powers, and decay commencing in the shape of pulmonary tuberculization, closes their earthly career, unless their vitality can be roused by rational treatment.

Those who are fortunately born with a fair amount of organic power, their progenitors being young and healthy, may damage it as they advance in life. Unfavorable hygienic conditions, accidents, cares, the thousand incidents of the struggle of life, may impair their originally good constitution, and diminish or even crush their vitality. When such is the case, death may come in a hundred ways, through the attacks of a hundred diseases; but one of the most common modes of decay, especially in towns, is pulmonary consumption. In town life the supply of atmospheric air is generally deficient, and this, I am convinced, is one of the most efficient immediate causes of phthisis.

In both cases—whether pulmonary consumption attacks persons deficient in inherited organic vitality, or whether it attacks those in whom originally sound vitality has been accidentally diminished by the wear and tear of life—it is in reality a secondary element. It is not the real disease, but a symptom of it. The real disease is exhausted or lowered vitality. Thus when a tree in a forest or plantation is attacked by insects, fungi, and parasites of all kinds, they are only *apparently* the cause of its decay and death. The young, vigorous, healthy tree resists their attack through its high vitality; full of life, it fears no such enemies. If they attack its less fortunate companion, it is because the latter is already sickly, diseased. The true remedy is not merely to scrape away the moss and to kill the parasites, for others will come; but to remove all causes of ill-health and decay: in a word, to rouse the vitality of the tree by trenching and draining the soil, by putting good loam round its roots, and by protecting it from all injurious influences. Thus only can we hope to succeed in arresting the decay. If we are successful, the tree will itself gradually shake off its enemies, and may even eventually be restored to pristine vigor and beauty. Such, I

believe, should be the treatment of pulmonary consumption. There is no panacea whatever for a disease which is merely a symptom of lowered vitality, of positive decay. But much may be done toward arresting the progress of this decay, and even toward effecting a cure, by the combined influence of hygiene, of climate, and of rational medical treatment. These are the three modes of treatment which I mean to discuss, and that in the order given—the order of their relative importance.

Hygiene.—If, as I have stated, the deposit or exudation of tubercle in the tissues, which, in the lungs, constitutes phthisis, is the result of defective nutrition, consequent on defective vitality, inherited or acquired, the rules for treatment become self-evident—they must be found principally in the strict observance of the laws of hygiene. In most cases of this disease it will be discovered, on careful inquiry, that these rules have been grossly infringed. The laws of hygiene may be considered to embody the conditions, bodily, social, and mental, which are the most favorable to the healthy development of the human economy, the most conducive to its well-being. These conditions have only been clearly elucidated by modern research, and are daily ignored and infringed by the immense majority of the human race—with comparative impunity by the strong, the vigorously constituted, but not so by the weak, by those who are born with defective vitality, or are living in unhygienic conditions. In both cases existences which, although weak, might have reached the ordinary term of human life under favorable conditions, are prematurely brought to a close.

Bodily hygiene includes principally good and abundant food, pure air, a clean skin, and exercise. Theoretically, the injunction to scrupulously attend to these points seems so rational in a disease of debility that it appears scarcely necessary to lay stress upon them; but practically it is not so. A large proportion of the medical profession, instead of looking upon the progressive deposit of tubercle in the lung, with its gradual softening, upon the hemorrhages, and the bronchial and laryngeal affections which it occasions or which precede it, as mere local symptoms of a general diathesis, have their attention arrested by the local condition. They exaggerate its inflammatory nature, and dare not apply to their patients the ordinary rules of hygiene; they dare not give wine and plenty of animal food; they dare not give fresh, cool air day and night; and they dare not keep the skin clean and cool by cold or tepid sponging. Yet this timidity is a fatal mistake, for these are the principal means by which nutrition is to be improved and restored

to a normal condition, and consequently by which the disease is to be arrested and cured.

The food taken by consumptive patients should be of the most nourishing kind—meat, fish, fowl, eggs, milk, bread—well cooked, and abundant in quantity. Indeed, the quantity of food taken should merely be limited by their digestive powers. In my opinion, the principal value of medical treatment in phthisis is in the restoration of digestive tone when impaired or absent. If patients can be brought to eat, to digest, and to assimilate, they have a chance of recovery. If they can not, their chance is indeed slight.

The medical attendant, however, must never forget the important fact which I developed at length in my work on "Nutrition in Health and Disease," published in 1856—viz: that there are two great types of digestive power, the quick and the slow. In many persons, in most indeed, the digestive process is rapid. Such individuals require food often—three, four, or more times in the twenty-four hours, and in that period they can take and digest animal food two or three times. If they have not frequent meals they feel faint and ill. The other class digest more slowly, more laboriously. They can only take food, with advantage and comfort to themselves, twice, or at the most three times, in the twenty-four hours, and only one meal must be a meat meal. Such individuals become dyspeptic if they try to assume the habits of those who require more frequent meals. The real remedy for their dyspepsia is not physic, but the adoption of a dietary more suited to their constitution. These peculiarities remain in disease, and must be attended to if the patient is to do well. There is no rule but the patient's own individual constitution. It is worthy of remark that the people who make two or three meals only, evidently get more out of their food than those with quicker digestion, and consequently can do well with less food.

A moderate amount of wine, as a tonic and gentle stimulant to digestion, I consider beneficial—say six or eight ounces; that is, three or four glasses of claret, burgundy, hock, or two of sherry, taken w th with meals, and diluted with water; or a glass or two of bitter beer if the stomach can bear it. Of late years, in America, whisky has been much lauded as a cure for consumption, on what rational ground I am really at a loss to conceive. I have seen a certain number of cases in which it had been long taken, but I can not say with benefit. The daily ingestion of large quantities of nerve-stimulating spirit certainly does not come under my notion of hygienic treatment. Carbonaceous

food can be given to all but any extent in a more natural and less pernicious form.

The above dietary may be insisted on, within the limits of reason, under all and every condition of the lung, with tubercular softening or without, with fever or without, with local inflammatory complication or without. We must try to struggle through unfavorable stages and complications without letting down nutrition.

I last year stated in *The Lancet* that I find many of the females whom I attend in the south each winter to be suffering from uterine disease, and that, through the usual morbid reaction of the uterus on the stomach, they have no appetite, are tormented with nausea, and can not eat. They all perish if I am not able in time to remove the uterine malady, and thus to restore the tone of the stomach, the natural desire for food, and the power of eating and digesting. Sometimes even when this has been accomplished, and they can eat and digest, it is too late. The disease has progressed too far, the lung is all but gone, has become a mere shell, and the patient sinks a victim sooner to uterine disease than to consumption, the apparent cause of death.

It seems also, at first sight, as superfluous to state that in a disease of debility like pulmonary consumption patients should breathe pure air as that they should live on nourishing food, but it is not so. Theoretically the value of pure air—of atmospheric food—is universally accepted by the medical profession; practically it is all but universally neglected. The physiology of respiration—a modern discovery—has yet to be applied, not only in every-day life, but even in the treatment of disease. Most medical men as well as their patients ignore the all-important fact that the demands of respiration are so great that one or two human beings soon use up and contaminate the air contained in a good sized room. Such being undeniably the case, unless it is renewed artificially, or by an open window or door; in other words, unless the air in an inhabited room is constantly undergoing change, impure air is ever breathed—air calculated to produce disease in the healthy, and to increase it in the sick. So universal is the neglect of this fundamental law of health, that the healthy persons who do not sleep in rooms with the windows, doors, and register stoves shut, and who do not thereby poison their blood all night with their own excreta, are as yet quite the exception. In ill health, and especially in diseases of the respiratory organs, the dictates of science and of common sense are still more grossly outraged. At a time when, perhaps, the principal food the economy can take is pure air; when the diseased lungs, partly inefficient, require the purest and best air-food that can be afforded them, the doors and windows are generally kept shut on pretense of chills, cold air, and draughts, a due supply of respirable air being thus refused to the unfortunate patient.

(*To be Continued.*)

MISCELLANY.

BEST METHOD OF DETECTING SMALL QUANTITIES OF ALBUMEN IN THE URINE.

It is of great clinical importance to possess a simple and certain method of detecting small quantities of albumen in the urine. After a great variety of experiments, I have come to the conclusion that nitric acid used in the manner about to be described—a modification of the plan suggested by Heller—is by far the most sensitive, reliable, and handy agent that can be used for this purpose by the physician.

Pour not less than half a drachm of *fuming* nitric acid into a test tube; incline it, and then let a like quantity of the suspected urine trickle very slowly to the acid, over the surface of which the urine will float without the slightest admixture. If albumen be present, a milk-white, sharply-defined, tolerably tenacious film will form at the exact point of junction of the two fluids. This film is never, at first, thick; and when the amount of albumen in the urine is extremely minute, it may be so thin as to become visible only by reflected light when the test tube is inclined. Occasionally, when very thin the albuminous film is dissolved in the course of a few hours. Commonly, however, it increases in breadth, diminishes in density, becomes yellow or yellowish green at its under surface, and throws off minute coagula, which fall through the acid to the bottom of the tube.—*Dr. Andrew Clarke, in Lond. Hosp. Reports*, Vol. I, p. 225.

M. ROSTAN.

This eminent professor of clinical medicine, at the Faculty of Paris, has just died at the age of seventy-seven. For twenty-five years did this highly gifted physician occupy that important chair, and his indefatigable efforts were crowned with the most signal success. He was the favorite of several generations of students, and justly so, as he possessed all the qualifications of a professor; a profound knowledge of and love for medicine, a handsome and dignified person, an eloquence of the most captivating kind, and ardent wish to convey information in the most agreeable manner, and most exemplary punctuality. Professor Rostan was the head of that school in France which referred all diseases to organic changes, his views being lucidly put forth in the successive editions of his great work on "Clinical Medicine." To this deceased physician we owe important investigations on softening of the brain, and many other works of value. M. Rostan was the great rival of Broussais, and both had, at that period, crowded audiences of enthusiastic pupils, this circumstance being mainly owing to the oratorical talents of both. The profession in Paris have testified by their presence at the funeral, and by the discourses delivered on the occasion, how highly they valued the departed physician.—*Lond. Lancet*, Oct. 13.

Flint on the Respiratory Organs.

A new and much enlarged edition of this valuable work has just been issued by Mr. Henry C. Lea, of Philadelphia. No medical man can afford to be without this handsome and instructive volume.

Diamond Making.

M. de Chancourtois, in a paper read before the Academy of Sciences, of Paris, announces that he has obtained in a little more than twenty years, small crystals of diamonds, by very slowly decomposing sulphide of carbon, by tin excited by a very weak electrical current.—*Quarterly Journal of Science*, Oct. 1866.

Dr. R. W. Richardson on Amyl, etc., etc.

Dr. Richardson reported on the action of Amyl, and exhibited his method of producing local anesthesia by ether vapors on the person of the president of the association, into whose arm he stuck needles, etc., without any pain being occasioned.

He also read an essay on the comparative vitality of the Jews and Christians, in which, after adducing a large number of statistics, he offered the conclusion that the great vitality of the Jews is owing to their temperance, faithfulness, cleanliness, and prudence—not to any traditionary hygienic law or race-characters.—*Ibid.*

"It must be confessed that just in proportion as the physical have been made to encroach upon what were supposed to be vital actions, our knowledge has advanced. It has now been proved that much of what was mysterious, must be considered due to gravity, imbibition, endamose, or chemical, electrical and mechanical operations. Now, as the laws regulating these physical forces are better known to us than such as govern the vital ones, not only in this way can we comprehend them better, but when required to modify them by art, we are enabled to do so with more effect. We can not, therefore, too strenuously urge forward all that physical research can do for us, although still conscious that while in this way we may learn much, physics, no more than chemistry, will ever wholly clear up the mysteries which surround the great fact of life."—*Dr. Bennett. Address on Medicine before the British Medical Association.*

"Some maintain that our profession ought to be a learned one, and the medical council have recently resolved that while a knowledge of Greek shall in future be imperative on students, an acquaintance with natural philosophy and logic shall be altogether optional. It is with the greatest deference I venture to think that such decision has not been made with a full comprehension of the tendencies of our science, or of its future requirements. It may be doubted also, whether the habits of mind acquired by cultivating a literary taste and an appreciation of the classic authors are such as will best fit the intellect for grappling with those difficulties which the severe study of vital action in health and disease involves. To this end, mathematics, logic, and physics are absolutely essential."—*Dr. Bennett. Address on Medicine before the British Medical Association.*

In Memoriam.

On the 10th October, of Cholera, Prof. David Brainard, of the Rush Medical College, of Chicago. Prof. B. had but recently returned from Europe when he fell a victim to the prevailing epidemic. We need not add that he was one of the most distinguished surgeons of our country. He was a member of the Societé de Chirurgie of Paris. His contributions to practical surgery have been numerous and of great value.

On the 20th October, Brevet Brigadier General Charles S. Tripler, M. D. Medical Director of the department of the northwest. In our next we propose to give a more extended notice of this distinguished surgeon and accomplished officer. At present we will only append the following proceedings of the Cincinnati Academy of Medicine:

"At a meeting of the Academy of Medicine the following report of the special committee was received, and ordered to be published in the daily papers:

"Whereas, Brevet Brigadier General Charles S. Tripler, Surgeon, U. S. A., has departed this life in the fullness of years, after arduous toil in the ranks of his profession for the advancement of learning and the benefit of mankind; and

Whereas, Although not a member of this Academy, his hearty co-operation and advice in all measures adapted to the public good are held in remembrance by us; therefore be it

"*Resolved*, That in the death of Dr. Charles S. Tripler the profession, the public service, and the community, have sustained a loss not easily reparable,

"*Resolved*, That in view of the long and faithful services of the deceased. and more especially of his eminent services in the organization of the Medical Department of the Army of the Potomac, we respectfully solicit the attention of the Congress of the United States to the interests of a family thus deprived of its head.

"*Resolved*, That these resolutions be communicated to the family of Dr. Charles S. Tripler, and published."

W. H. Gobrecht, M. D.,
Robert Bartholow, M. D.,
J. P. Walker, M. D., } Committee.

February Number of the Cincinnati Journal of Medicine Wanted.

We should be grateful to any of our friends who may have duplicates of the February issue if they will send them to us.

Notice to Subscribers and Advertisers.

Mr. Charles E. Wright, Medical College of Ohio, is authorized to receive subscriptions for the Journal for 1866, and to collect from all indebted to it, whether for subscriptions or advertising. In this connection we urgently request the small number of our subscribers, who are still delinquent, to pay at once.

IN PREPARATION.

LEGAL LIABILITY

IN CASES OF

SURGICAL MALPRACTICE,

IN ITS PRINCIPES AND LIMITS.

BY GEORGE C. BLACKMAN, M. D.,

Professor of Surgery in the Medical College of Ohio.

STANLEY MATTHEWS, ESQ.,

Of the Cincinnati Bar, lately one of the Judges of the Superior Court.

ONE VOLUME. 8VO.

"IT will be the aim of this work to meet a want urgently felt both by the Legal and Medical Profession. Trials for Surgical Malpractice are quite frequent throughout the country, and both Counsel and Surgeons are often put to great trouble in their research after cases and reports of trials which bear upon the question at issue. Professor Blackman will endeavor to present the Surgical branch of the subject in such a manner that the members of the Bar may be able, with less trouble than heretofore experienced, to become acquainted with the modern surgical teachings of our highest authorities which have reference to these trials. To render still further aid, numerous illustrative engravings will be given with the text, which will be of great value in the study of fractures and injuries in the vicinity of the joints, the results of which have given rise to so many trials. Other anatomical and surgical illustrations will be given so as to make the work far more complete than any yet published.

The discussion of the limits of legal rights and responsibilities growing out of such cases, in the light of judicial decisions, will be furnished by Judge Matthews.

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